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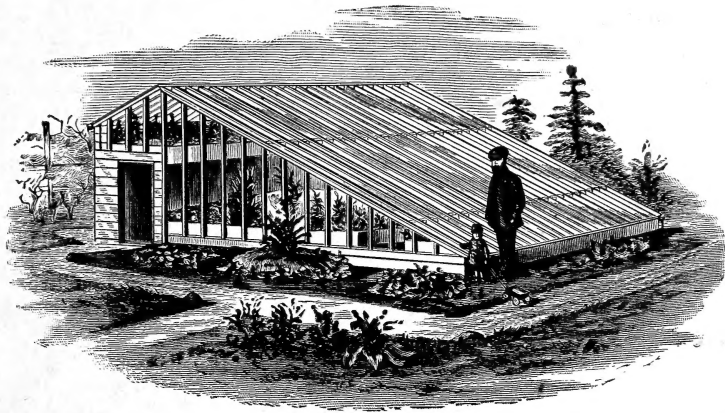
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7890
SPRING OF 1890.

A. I. ROOT'S CATALOGUE OF SEEDS FOR THE GREENHOUSE, GARDEN, AND FARM. — AND ESPECIALLY FOR BEE-KEEPERS. —

TENTH EDITION.



PRICE 5 CTS. PER PAPER; 10 PAPERS, 40 CTS.; 100 PAPERS, \$3.50.

Seeds of new or rare vegetables and novelties, we include at the uniform price of 5 cents per package; but, of course, we are obliged to put a smaller number of seeds into such packages. This will be noticed with the Bush Lima Bean and Snowball Cauliflower, etc. Now, these 5-ct. papers are all sent by mail postpaid; but when you order seeds BY THE OZ., or LB., you must pay 9 cts. extra for postage and packing on each and every pound of seeds ordered. Peas and beans by the pint and quart, must also have 8c per pint, or 15c per quart, added for postage; on corn, add 12c per qt. for postage. One-fourth oz., lb., or peck will be sold at oz., lb., or peck rates.

ASPARAGUS.

Asparagus, Palmetto. Oz. 10c; lb. \$1.50.

We have given this new variety a trial beside the Colossal, and it is certainly a stronger and more robust plant.

Asparagus Roots. Palmetto, 10 for 10c; 75c per 100; \$6.10 per 1000. By mail, add 5c for 10, or 20c per 100.

BUSH BEANS.

Henderson's New Bush Lima Bean. ½ pt. 40c; qt., \$1.00; peck, \$6.50. (Dwarf Lima, or Carolina.)

In our catalogue for 1889 we pronounced this the most important novelty for 1889. It is a genuine bush lima bean; but I do not see how a seedsman can conscientiously advertise it without mentioning that it is much smaller than the ordinary pole lima bean. In every other respect it is fully equal to the pole limas, and may prove a valuable acquisition to many who can not well go to the time and expense of providing poles. It is exceedingly prolific, each stalk or stem bearing from 50 to 100 pods, under good cultivation. The extra trouble of picking and shelling, in order to get them ready for the table, is the only drawback. We have them put up in 5-cent packages containing 10 beans.

Kidney Wax. ½ pt. 10c; pk. \$1.50.

This is an improvement on the ordinary Golden Wax Bean, in giving us larger pods, more perfectly free from rust; and last, but not least, if you can not sell all of them for snap-short beans you have a shell bean that is nearly equal in size and quality to the larger white kidney bean; and if you do not sell them all shelled, you have a good crop of dry, nearly all white, kidney beans. We consider it quite an acquisition.

White Kidney, Large. Pt. 10c; pk. \$1.00. Bu., \$3.25.

One of the best to use shelled, when green or ripe. We sell bushels of these at 10c a pint, shelled green. We market them in new pint strawberry-boxes.

York State Marrow. The best field bean. Pint, 10c; peck, \$1.00; bush, \$3.25.

POLE BEANS.

Extra-Early Lima Beans. These are fully equal to the old lima beans, and are fully as productive, and from ten days to two weeks earlier. We consider it an acquisition. Price 20c per pint, or \$2.50 a peck.

King of the Garden Lima. ½ pt. 10c; qt. 30c; peck, \$2.00.

These are fully as good as the common lima, and the pods are considerably larger, saving time in picking and shelling, as well as increasing the yield. We get 15 cents per pint for these, when green, shelled. See White Kidney bean above.

All of our beans will be furnished in 5-cent packages; but where they are to go by mail, postpaid, of course the above packages will have to be quite small. If wanted by mail, add 8c per pt. or 15c per qt. for postage.

BEEETS.

Eclipse. Oz. 5c; lb. 50c.

These have given us the best satisfaction of any thing we ever raised in the way of beets. They are a very quick grower, of excellent quality, and the appearance of the bright smooth scarlet bulbs is fully equal to any thing that has been pictured in the colored plates of our catalogues. In order to get a fancy price for them, start them in the greenhouse, and transplant when of the size of peas, or a little larger. They bear transplanting well, and are exceedingly hardy. Seed is of our own raising from selected roots.

Philadelphia Turnip. Oz. 5c; lb. 50c.

This is a little later and larger than the above, and is a novelty because of its alternate rings of dark and light pink.

Lane's Improved Sugar. Oz. 5c; lb. 35c.

The best variety for stock-feeding. It showed a larger percent of sugar at the Experiment Station than any other analyzed. It is so sweet, that, when small, they are nice to eat raw. Has yielded as high as 30 tons to the acre.

Long Red Mangel. Oz. 5c; lb. 30c; 10 lbs. \$2.50.

Yields enormously, but not so sweet as Lane's improved. Seed is of our own raising, from selected roots.

CABBAGE.

Select, Very Early Jersey Wakefield. Stock seed. Oz. 20c; lb. \$2.50.

Our cabbage seed this year is raised by H. A. March, Fidalgo Bay, near Puget Sound, Washington Territory. Thousands of sample packages were sent out by us in 1888, and friend March's seeds ought to be pretty well known. The Early Jersey Wakefield, of the best selected strain, is fully as early as any other cabbage known, and greatly superior in quality. We have sold single heads at retail at 30c each raised from plants started in the greenhouse in February.

"Newark" Flat Dutch. Oz. 10c; lb. \$1.50.

This is an improvement on the old standard Flat Dutch, and earlier. Pronounced by Brill "extra fine."

Winningsstadt. Oz. 10c; lb. \$1.50.

Much like the Jersey Wakefield, but later and larger. The heads are round, and some of them are so hard as to seem almost like bullets. Our customers, many of them, greatly prefer these and Henderson's Early Summer cabbage to the later flat cabbages.

Louisville Drumhead. Oz. 10c; lb. \$1.50.

One of the most uniform and surest-heading sorts tried at the Ohio Experiment Station. It is a little earlier than Flat Dutch, hence may be planted later; just the kind to plant after early crops.

Fottler's Brunswick. Oz. 20c; lb. \$2.50.

This is one of the old staple varieties, and is perhaps planted as extensively as any one variety, from medium to late cabbage. Our seed was raised by H. A. March, the same as the Early Jersey Wakefield, and our entire stock is STOCK seed; that is, it is from the very BEST HEADS that could be selected out of a field of several ACRES.

Excelsior Flat Dutch. Oz. 15c; lb. \$2.00.

Pronounced by Brill the BEST LATE CABBAGE. During the past season this has given us the finest heads of LARGE CABBAGE we have ever grown.

Perfection Drumhead Savoy. Oz. 10c; lb. \$1.50.

The Savoy cabbage is handsome in appearance, and richer and finer in quality, and STAYS CRISP longer than any of the other varieties. In taste it nearly approaches the cauliflower.

Large Red Drumhead. Oz. 10c; lb. \$1.50.

This is a red cabbage for pickling. The bright red, by way of contrast, will make a loaf or lot of cabbages attract attention, and there is always more or less demand for red cabbage for pickles. Heads are very solid, and SPLENDID KEEPERS.

CARROTS.**Early French Forcing.** Oz. 10c; lb. \$1.00.

These are small, but very early, and often bring a good price, because they are the first that make their appearance in the market. Bunched up with early radishes, they are very taking in appearance.

Orange Danvers, Half-Long. Oz. 5c; lb. 60c.

Yields well, and is easy to dig. The best sort known.

CAULIFLOWER.**Henderson's Early Snowball.** Raised by H. A. March. $\frac{1}{4}$ oz. 75c; oz. \$2.50.

Nice specimens of early cauliflower often bring extravagant prices, and it pays well to start them in the greenhouse, and use hand-glasses to forward them before the hot weather comes on.

CELERY.**Henderson's White Plume.** Oz. 20; lb. \$2.50.

We place this at the head of the list, and especially for early celery. During the past season we had fine stalks on the market in July, and it sold readily at 10c each. The seed was started in the greenhouse about the middle of January. On account of its self-blanching qualities it is better fitted for early celery than any other.

Golden Self-Blanching Celery. $\frac{1}{4}$ oz., 15 cts.;

Oz., 50c; lb., \$5.00.
It is different from all others we have seen, in being not only more dwarf—i. e. shorter, but it is also thicker; in fact, the plant, when fully matured, is so thick and stumpy as to create surprise. The variety is so well and thickly bleached by banking up is not more than that of the White Plume. It is rather an early celery, and should be used soon after approaching maturity.

Golden Dwarf. Oz. 15c; lb. \$2.00.

One of the standard sorts for a later crop. The golden tint of the head stalks makes it a very handsome vegetable.

Boston Market. Oz. 10c; lb. \$1.50.

An old standard variety in and around Boston, and raised largely throughout the land. Never gets hollow and stringy.

New Rose. Oz. 20c; lb. \$2.50.

This seed was furnished us to try by Atee Burpee, last year; and our verdict is, that it is not only the hardiest and best grower among the whole celery family, but, when properly bleached by being put away for winter, it has given us the finest and most delicious and crisp celery we ever tasted. Although it is a red celery, the growing is really white; there is hardly a trace of the pink color, but it is a beautiful creamy white. We place it at the head of every thing else for a LATE WINTER celery.

CORN (FOR TABLE USE).**Cory's Extra Early.**

Cory's corn has not only proved to be the earliest by ten days or two weeks, but the ears are surprisingly large and fine; and the quality, if cooked at once, as soon as picked, is almost equal to any sweet corn we have. It is quite an acquisition.

Ford's Early Sweet.

Excellent in quality, and exceedingly early.

Late Mammoth Sugar.

This is excellent in quality, and gives ears of mammoth size; and is a wonderful yielder. Besides this, our strain is the SWEETEST sweet corn we have ever grown, and we have tested all the novelties that have been recommended. Our trade has been very large in this kind of corn for eight or ten years past.

Corn we sell at 5 cents for a half-pint package; but at this price purchasers must pay the postage, which is 3 cents for each half-pint. If ordered in larger quantities the price will be \$1.00 per peck, or \$3.50 per bushel.

Corn Salad. Oz. 5c; lb. 60c.

Sometimes called Lamb's Lettuce. It is to me a most delicious salad, something like lettuce, but having a peculiar rich flavor suggestive of cowslips and spring. It is very hardy, and will often stand out all winter. It does splendidly in greenhouses and cold-frames; is not attacked by the GREEN FLY.

CRESS, OR PEPPER GRASS.**Extra Curled.** Oz. 5c; lb. 50c.**CUCUMBER.****Early Frame.** Oz. 5c; lb. 50c.

The earliest cucumber.

Rawson's Improved Early White Spine.

Oz. 25c; lb. \$3.50.

This is the kind he uses for raising in his greenhouse, and the cucumbers bring 50 to 75 cents each, even where he raises them by the thousands. Fine specimens are wonderfully handsome and taking, and they sometimes grow to a great size without getting yellow.

Nichol's Medium Green. Oz. 5c; lb. 60c.**KOHLRABI.****White Vienna.** Oz. 10c; lb. \$1.25.

This is a quick-growing vegetable, half way between turnip and cabbage. If the plants are started in the greenhouse, the vegetable may be put on the market at the same time with the very earliest cabbages; and where people once get a taste of it, it is pretty sure to meet with a rapid sale at good prices.

LETTUCE.**Grand Rapids Lettuce.** $\frac{1}{4}$ oz., 10c; ounce, 35c; pound, \$4.50.

This is a new variety, developed in the vicinity of Grand Rapids, specially for greenhouse culture. It has been developed from the Black-seeded Simpson, by something like fifteen years of careful selection. It is superior and beautiful in appearance, a strong grower, very tender and crisp, and, so far as known, free from rot, and will keep from withering longer while exposed for sale than any other variety known. At least fifty large greenhouses are now engaged in raising this kind of lettuce for market, in the neighborhood of Grand Rapids, Mich. For further particulars, see our new book, "What to Do," etc.

Boston Market. Oz. 10c; lb. \$1.25.

The best variety of HEAD lettuce for greenhouse culture, as the heads are small, but compact and handsome.

Landreth's Forcing. Oz. 15c; lb. \$2.50.

Excellent for hot-beds and cold-frames; exceedingly early. The heads are smaller than Boston Market.

Henderson's New York. Oz. 15c; lb. \$2.00.

We consider this the best head lettuce for outdoor culture known. Even the chickens have discovered that it is of superior quality. They will run over our beds and pick out every head of New York lettuce, without paying any attention to any other kind.

Hanson. Oz. 10c; lb. \$1.00.

An old standard variety, producing heads that sometimes weigh as much as 2 lbs.

MELONS, MUSK.**Extra Early Citron.** Oz. 10c; lb. \$1.00.

Always profitable because of its extreme earliness.

Casaba, or Persian Muskmelon. Oz. 5 cts.; lb. 60c.

A standard large variety.

Montreal Nutmeg. Oz. 5c; lb. 60c.

Large size, beautiful looking, very small cavity for seeds, and one of the very best.

Pine Apple. Oz. 5c; lb. 60.

Excellent in quality, and only medium in size.

Banana. Oz. 5c; lb. 75c.

I consider this one of the best muskmelons it has been my fortune to taste. They are long like a rail, or like a banana, if you choose; but the color is strikingly like a banana, and what is more wonderful still, it has an odor also like the banana.

Emerald Gem. Oz. 10c; lb. \$1.50.

This is a small one, say from $\frac{1}{4}$ to 2 lbs. The skin is of a deep emerald green, and the flesh is of a salmon color—very delicious. My way is to eat it with a spoon, scraping the melon clear down to the rind. Of course, they want to be well ripened. I believe I should call it the most delicious of all muskmelons.

MELONS, WATER.**Phinney's Early.** Oz. 5c; lb. 60.

The quality is very good, but the size is not very large.

Landreth's Boss. Oz. 5c; lb. 60.

A melon size seems to command more of the good qualities for a large late watermelon than any other.

ONION.**Mammoth Silver King Onion.** Pkt., 5c; oz., 20c; lb., \$2.50.

To get the onions early, the seeds are started in a box in a greenhouse. When about two inches high they are planted out as you would plant out cabbage or celery. During August and September we have onions larger than any in our locality; and as we sell them by the pound, many of them bring 10 cts. each. We regard them as an acquisition.

Extra Early Red. Oz. 15c; lb. \$2.00.

Medium size, red, and an excellent keeper.

Silverskin, or White Portugal. Oz. 25c; lb. \$2.50.

A standard variety for pickles, or for handsome bunch onions. Better flavored than the dark-skinned.

Yellow Globe Danvers. Oz. 15c; lb. \$1.75; 5 lbs. \$1.50 per lb.; 10 lbs. \$1.40.

A standard yellow variety. The best of all to grow from seed. It makes a wonderful difference, however, how the seed is grown. Some strains will give nearly double the crop that others will. Our seed for this year was grown by a neighbor, the father of W. J. Green of the Experiment Station, Columbus, Ohio.

White Victoria. ¼-oz. 20c; oz. 65c; lb. \$8.

We regard it as an acquisition for bunch onions, from the fact that the bulbs, when grown in muck, are of a pearly whiteness, and need no soil. If sown tolerably thick, so that you can pull them by the handfuls. Tie a string around them, swish them in a bucket of water, and they are ready for market. If sown early, we get 6 cts. for a ¼-lb. bunch. These, besides being valuable for bunch onions, when given room and proper culture grow to an immense size. Single specimens last season reached the enormous size of 4 pounds.

ONION SETS.

We have those of Yellow Danvers and Silverskin.

Prices, of yellow, 15c per quart; \$1.00 per peck, or \$3.00 per bushel. Silverskin, one-half more than above prices. Large-size sets (often used for pickles), one-half the above prices. By mail, 10 c. per qt. added.

Winter, or Egyptian Onion Sets. Prices, 10c per qt., or 75c per peck. By mail 10c per qt. extra. This onion does not produce a bulb at all, or at least only a very inferior one. All it is raised for is its long succulent stalks, with a sort of root, or small bulb, on the lower end. It has such an inveterate habit of growing that it grows any time when in the ground or out of it; and, in fact, almost the only place to keep it is in the ground. During August and September the sets may be gathered and sown. You can, with care, keep them over winter. The sets grow in the form of little onions, on the top of the stalk, like the old-fashioned onion-sets we used to see when we were children. We gather these sets as soon as they are ripe, say about the middle of August; then we sprinkle them in a drill, about as we would peas, say from three to five inches apart.

PARSNIP.

Bloomsdale. Oz. 5c; lb. 40c; 10 lbs., \$3.00.

This is the only kind we have, but we consider it equal to any.

PARSLEY.

Fine Curled or Double. Oz. 5c; lb. 50c.

PEAS.

Landreth's Extra Early. ¼ pt. 5c; pk. \$1.50.

We consider this equal to any for the first peas of the season. It yields its crop in a very short time. Not equal in quality to the American Wonder.

Alaska Peas. ¼ pt. 5c; peck, \$1.50.

This pea is not only the earliest of any thing we have ever tried, but, strange to tell, it is also of a delicious quality, very productive, and an excellent pea in every respect, except that the pods look ready to pick before the peas inside are large enough to amount to anything. If you pick them when they look plump and full you will disappoint your customers, and have trouble. Get careful pickers; tell them not to pick a pod until they know by squeezing it that there are good-sized peas inside, and you will then call it, and so do, ahead in quality of any other EARLY pea in the world.

American Wonder. ¼ pt. 10c; pk. \$1.75.

This is a cross between the Champion and the Little Gem. The vine grows from 6 to 8 inches high. It is the first to ripen among the green wrinkled sorts. On account of its dwarf habits it can be grown very easily under glass.

Stratagem. ¼ pt. 10c; pt. 20c; pk. \$1.75.

This has made its way rapidly in public favor. It is not only of rare excellence in quality, but the pods and peas are so large and fine looking they call attention at once from any thing else in the market. It has given us excellent satisfaction.

Champion of England. Pint, 15c; pk. \$1.50; bushel, \$5.50.

So well known as to need no recommend here.

Peas by mail will be at same rate as beans for postage.

PEPPERS.

Spanish Pepper. Oz. 25c; lb. \$3.00.

A new variety, so large that the natives of warm climates slice them up and fry, as an article of food.

Bullnose. Oz. 25c; lb. \$3.00.

A larger variety than the above, but in every other respect the same.

Cayenne Pepper. Oz. 25c; lb. \$2.50.

Much called for, for seasoning soups, pickles, etc.

POTATOES.

Early Ohio.

The Experiment Station, Columbus, O., says there is nothing earlier.

Early Puritan.

Nearly as early as Early Ohio, and much more productive.

Highly recommended by our Ohio Experiment Station. Prices: 1 lb. by mail, 35c; 3 lbs. 60c; 1 peck by express or freight, 50c; 1 bushel, \$1.50.

Lee's Favorite.

This is a few days later than the foregoing, but yields better still. In our locality during the past season it has given us over 100 bushels, from one-fourth of an acre.

Empire State.

This, the Experiment Station considers as good a late or medium late potato as any before the public. They decide that the above four varieties are the cream of the list.

Beauty of Hebron.

This is preferred by Terry because it gives as good, or better yield than any other, and comes off early enough to admit of getting in wheat in good time. It is a standard early sort.

Prices of any of the above, except Early Puritan: 1 lb., by mail, 15 cts.; 3 lbs., 40 cts.; 1 lb., by express or freight, 7c; 1 peck by express or freight, 35 cts.; 1 bushel, \$1.00. Barrel, \$2.75.

Potato-eyes. Any of the above varieties by mail postpaid, 15c for 10; or 75c per 100.

PUMPKIN.

Early Sugar Pumpkin. Oz. 5c; lb. 75c.

This was selected from 13 different kinds of pumpkins last season. They are small, somewhat chise-shaped, handsome in color, and sell on our market-wagon readily at the same price as Hubbard squashes. They are specially designed for the first pumpkin pies of the season.

Connecticut Field. ½ pint, 5c; quart, 15c; peck, 75c; bushel, \$2.00. If wanted by mail, add at the rate of 16c per quart for postage.

RHUBARB.

Either Victoria or Linnaeus. Oz., 10c; lb., \$1.50.

RADISHES.

Early Scarlet Globe. Pkt. 5c; oz. 10c; lb. \$1.00.

This is the radish that Vick gives such a beautiful chromo of in his catalogue for 1888; and for forcing in the greenhouse, it is ahead of any other in the way of forcing radishes. They begin to form a bulb almost as soon as the second leaves come out. They are very hardy, and of exceedingly rapid growth.

Wood's Early Frame. Oz. 5c; lb. 60c.

The very best long radish for raising under glass, or for extra early.

White-tipped Scarlet Turnip. Oz. 5c; lb. 60c.

A fancy variety of the scarlet bulb with white bottom; very showy.

Lady Finger. Oz. 10c; lb. \$1.00.

One of the standard long radishes. Sometimes it grows as large as a parsnip, and yet is of excellent quality.

Beckert's Chertier Radish. Oz. 5c; lb. 50c.

A novelty, and one that has given us the greatest satisfaction; of rapid growth and good size, both at the bottom and top. In favorable soil it will grow to a large size, and still be excellent in quality. They are remarkably certain to make a good bulb.

Chinese Rose Winter. Oz. 5c; lb. 60c.

These not only stand cold weather until toward Christmas, but we consider them really a most delicious radish, and the most free from being corky of any radish known. They are not as strong as radishes ordinarily are, but are of a sweet turnip flavor. Usually sown at the time we sow turnips.

SALSIFY, OR OYSTER PLANT.

New Mammoth. From Sandwich Islands. Oz. 10c; lb., \$1.50.

We have grown this side by side with the common salsify, and we find the roots larger, better shaped, and equally good in other respects; they are, therefore, without question an improvement.

SPINACH.

Bloomsdale Extra Curled. Oz. 5c; lb. 35c.

It combines as many of the good qualities as any other.

SQUASH.

SUMMER VARIETIES.

Early White Bush, or Patty Pan. Oz. 5c; lb. 60c.

Not surpassed by the Golden Summer Crookneck. One of the old staples.

Golden Summer Crookneck. Oz. 5c; lb. 50c.

Giant Summer Crookneck. Oz. 15c; lb. \$1.75.

This squash is as early as the ordinary crooknecks, and in every way equal; but are of such size that one squash will make a dinner, even when soft and tender; and one good thrifty plant will almost supply a family.

WINTER VARIETIES.

Perfect Gem. Oz. 5c; lb. 50c.

A round squash, about 6 inches in diameter. The quality is excellent, and it will keep till spring.

Hubbard. Oz. 5c; lb. 60c.

Too well known to need comment. We have tried nearly all the new squashes, but have not yet found a better one.

Boston Marrow. Oz. 5c; lb. 50c.

An old standard staple, especially in and around Boston.

PRICE 5 CENTS PER PAPER; 10 PAPERS, 40 CENTS; 100 PAPERS, \$3.50.

TOMATO.**Dwarf Champion.** Oz. 20c; lb. \$2.50.

This is a great acquisition for an early tomato. It is not only very early, but the shape is equal to any of our best kinds, and it stands up without staking, on account of its strong stalk. They are smooth and handsome, and ripen all over nicely, quite a little ahead of the Mikado.

Lorillard. Oz. 40c; lb. \$5.00.

We have tried this, and it seems to be the best adapted for greenhouse culture of any we have ever got hold of. It is also a very nice tomato for growing in open ground; nice in shape, handsome in appearance, and as early as any.

Golden Queen Tomato. Pkt., 5c; oz., 25c; lb., \$3.00.

This is no special novelty, that I know of, over other tomatoes, except its beautiful golden yellow color; but at the same time the tomato is good-sized, and remarkably smooth and regular. The quality is equal to any. Many specimens of the fruit have a rosy tint toward the blossom end, giving it something the appearance of a beautiful yellow peach with a slight blush of red.

Ignotum Tomato. $\frac{1}{4}$ oz. 30c; oz. \$1.00; lb. \$12.00.

During the year 1889 we sent out about 3000 sample packages of the Ignotum tomato; and the general testimony of those who have grown it corroborates the decision of the Michigan Agricultural College, that it is, all things considered, the best, and they gave it a test-side by side with over 100 different varieties. It has no rival that I know of in size, except the Mikado. There are, however, several kinds (among them Livingston's Beauty) that are rather handsomer in shape, but they are behind in size and earliness. In solidity the Ignotum is behind none; and for slicing up for the table we have never found any thing better.

Mikado. Oz. 25c; lb. \$2.50.

Until we got hold of the Ignotum, the Mikado was our preference for an all purpose tomato; and even now it is the largest tomato we have ever got hold of. It is also nearly as early as any. Its only defect is, that a great part of the fruit is irregular in shape. Notwithstanding this, while you can get tomatoes by the bushel, weighing from a pound to a pound and a half, they are sure to be in demand on account of the time saved in preparing them for the table, or for canning. Besides, it is but a few minutes' work picking a bushel, compared with most other kinds. The shape of the leaf distinguishes it from all other kinds.

Acme. Oz. 20c; lb. \$2.00.

Too well known to need comment.

Trophy. Oz. 20c; lb. \$2.00.

A companion to the Acme.

Livingston's Beauty. Oz. 20c; lb. \$2.00.

This is a production of the same Livingston who brought out the Acme, Trophy, Favorite, and Perfection; but he pronounces this superior to them all. They are better shaped and smoother than the Mikado, but not so large.

Pear-Shaped Tomatoes. Oz. 20c; lb. \$3.00.

These are handsome for pickles and preserves. We have them of two colors—red and yellow. They are immense bearers, and of good quality.

Peach Tomato. Oz. 25c; lb. \$3.00.

These are quite early, look nice (can hardly be told from peaches), and sell well when put into new quart strawberry boxes. We sold them last season at 5c per quart. They never rot, and in quality are excelled by none. Small size is their only fault.

TURNIP.**Extra-Early Turnips.**

We have tested some of these which are advertised in the different seed catalogues; and while we find them some earlier than the staple turnips, they are, so far as we have tested them, inferior in quality, very strong in taste, and sometimes bitter.

Purple-top White-globe Turnip. Oz. 5 c.

lb. 40 c.

This turnip has given us the best results of any thing we tried; the quality seems to be unusually fine for table use, especially when they are about as large as fair-sized apples. They grow nearly as quick as any other turnip known, and are very handsome. When washed they are almost as white as an egg, with a beautiful purple around the top. They are smooth and round.

Yellow Aberdeen. Oz. 5c; lb. 40c.

We consider this the best table turnip grown. When cooked it is so yellow that it will sometimes be mistaken for squash.

Bloomsdale Swede. Oz. 5c; lb. 50c.

Perhaps the best of the Rutabaga varieties.

Southern Prize. Oz. 5c; lb. 50c.

For many years I have wondered if it were not possible to get a real turnip as strong growing and as hardy as the Seven-top. This we have finally secured, in the "Southern Prize." It stands all winter, even in Ohio, without protection; and, in fact, it seems to grow all winter; and, best of all, it has a good-sized bulb (of fair quality) that winters over as completely as a parsnip.

VEGETABLE PLANTS.

These are one of our great specialties, and we are prepared to furnish cabbage and lettuce plants from the first of February till the first of August; celery-plants from the first of March till the first of September; tomato-plants from the first of April till the first of August.

PRICES AND VARIETIES.

ASPARAGUS PLANTS.

HENDERSON'S PALMETTO plants, 2 years old, 10c for 10; 75c per 100, or \$6.00 per 1000.

CABBAGE-PLANTS.

We keep in stock during the months of Feb., March, April, May, June, and July, varieties as below:

SELECT VERY EARLY JERSEY WAKEFIELD. HENDERSON'S **EARLY SUMMER**, and **WINNINGSTADT**. 5c per 10; 100, 40c; 1000, \$3.00; 10,000, \$25.00. During May, June, and July, **FLAT DUTCH**, **FOTLER'S BRUNSWICK**, and **LOUISVILLE DRUMHEAD**, prices same as above. **PERFECTION DRUMHEAD SAVOY CABBAGE**, and **LARGE RED DRUMHEAD** ready in May, June, and July, 8c per 10; 60c per 100, or \$5.00 per 1000.

Extra-strong, twice-transplanted plants, double above prices. If these are to be shipped by express, the expressage will be extra, on account of the great weight of the large plants.

COLD-FRAME CABBAGE-PLANTS.

When we have these they will be double the price of the plants raised in the greenhouse. During the present season we have only one kind of cold-frame cabbage-plants; viz., extra selected **JERSEY WAKEFIELD**.

CALIFLOWER.

We have confined our attention to the one kind—HENDERSON'S **EARLY SNOWBALL**. Price of plants, 10c for 10; 75c per 100; \$6.00 per 1000. These will be ready in March, April, May, and June.

LETTUCE-PLANTS.

We can furnish **BOSTON MARKET**, **GRAND RAPIDS**, and HENDERSON'S **NEW YORK**. Prices, 5 cts. per 10; 40 cts. per 100; \$2.50 per 1000.

Any of the above plants will be taken directly from the seed-bed, without having been transplanted at all, at half the above prices.

PRICE 5 CENTS PER PAPER; 10 PAPERS, 40 CENTS; 100 PAPERS, \$3.50.

TOMATO-PLANTS.

These will be ready from April first till August first. We have the following varieties:

ACME, **LIVINGSTON'S BEAUTY**, **MIKADO**, **DWARF CHAMPION**, and **PEACH TOMATO**. The above will be 10c for 10; 75c per 100; \$6.00 per 1000; or \$50.00 per 10,000.

The **IGNOTUM** will be $\frac{1}{2}$ more than above prices.

PEAR-SHAPED TOMATOES, for pickles and preserves. Plants, both red and yellow, 8c for 10; 75c per 100; or \$6.00 per 1000.

All the above plants are once transplanted, and are strong-rooted.

CELERY-PLANTS.

We keep in stock HENDERSON'S **WHITE PLUME**, **GOLDEN DWARF**, **BOSTON MARKET**, and **GOLDEN SELF-BLANCHING**. Prices, 5c per 10; 40c per 100; \$3.00 per 1000; or \$25.00 per 10,000.

Extra-strong, twice-transplanted plants, double above prices. If these are to be shipped by express, the expressage will be extra, on account of the great weight of the large plants.

PEPPER-PLANTS.

We expect to keep in stock **BULLNOSE**, **CAYENNE**, and **SPANISH PEPPER**. The price will be 15c for 10; \$1.25 per 100, or \$12.00 per 1000.

We can send plants by mail if enough is added to cover postage and packing, which will be 5c for 10, or 25c per 100.

STRAWBERRIES.

After having tested most of the new strawberries advertised, I have settled down on just four. The berry to which I would at present give the preference over all others, for a general-purpose berry, is the Jessie. During the past season it not only gave us our *first* berries, but it also gave us our last, except Jersey Queen and Gandy, and also our *largest*, except Bubach. Why, then, is it not the best strawberry in the world? Well, it is because it is not as productive as some others—the Crescent, for instance. Next to the Jessie I would put the old and well-known Sharpless; and in some localities the Sharpless may perhaps do better than the Jessie. The third on our list is the Jersey Queen. This is a very nice berry, but not a very rank grower, and not very productive. Its merit is, that it is very late. It will give you beautiful berries that will command a high price after the others are about gone. Now, in addition to the above three, I have thought best to offer the new Bubach. Its merits are, that it is a wonderfully strong grower, and bears the largest berry I have ever seen. Its defect is, that it is a pistillate variety, like the Jersey Queen, and must, therefore, be planted near some staminate. Next, the berries are very soft, when fully ripe. If you can get them to your customers about as soon as they are picked, they are all right. Price of the SHARPLESS, 10c for 10; 50c per 100; \$4.00 per 1000. JESSIE and JERSEY QUEEN, 10c for 10; 75c per 100; \$5.00 per 1000. BUBACH, 15c for 10; \$1.00 per 100, or \$7.50 per 1000.

If wanted by mail, add 5c for 10, or 20c per 100 for postage.

We can furnish strawberry plants, from March 1st until Dec. 1st, inclusive.

SEEDS OF HONEY-PLANTS.

I have for years had dreams of a honey farm, with acres of flowers of different colors, blooming at different seasons, and keeping the bees away from the stores and groceries when we have a dry spell in the fall. The dream has been partially realized with the Simpson honey-plant, Mollie O. Large's spider plant, and the seven-top turnip, but I am pretty well satisfied it will not pay to cultivate these for honey alone. Mignonnette, catnip, motherwort, borage, melilot, and some others, I have tested, but I am quite sure that none of them have ever paid, just for the honey.

We first give a list of the plants that not only yield honey, but also produce crops for their other products. If the bee-keeper can not raise these himself, he can often reduce farmers round about him to do the same by furnishing the seed free, or (where it is expensive) part of the price of the seed. As an illustration: We have for years been in the habit of furnishing buckwheat seed free of charge to any one who will sow it within a mile and a half of our apiary. Alsike, white Dutch clover, and Mammoth (or Peavine) we furnish at *half* the usual price. Now, then, friends, which is the most important honey-bearing plant, generally speaking in the world? I am inclined to think that basswood (or linden) bears the *largest quantity* of honey, although it is not generally considered quite equal to clover in flavor; for in the honey-markets it usually sells for one cent per pound less than clover. We, however, put basswood first and clover second.

Basswood-trees.

	Per 10	Per 100
One foot and under, each.	.05 .30	\$ 2 00
The above by mail,	.08 .40	2 50
One to five feet,	.10 .75	5 00
Five to ten feet,	.15 1.25	10 00

These will be taken directly from our nursery, and if planted any time after the leaves have fallen, until the ground freezes, not one in one hundred should fail to grow. They can also be sent during the months of March, April, and May; and spring planting is preferable. For a description of the basswood, with engraving, see A B C. Basswoods may be planted along the roadsides so as to answer for shade-trees, and at the same time furnish honey. The bee-keeper can also usually arrange so as to get them planted for shade along the streets of towns and cities. We can furnish the basswood-seeds desired; but as they require special treatment I think our friends will be much better satisfied to buy little trees.

Alsike Clover. One ounce, by mail, 5 cts.; 1 lb., by mail, postpaid, 25 cts.; by express or freight, 1 lb., 15 cts.; one peck, \$1.90; $\frac{1}{2}$ bushel, \$3.60; bushel, \$7.00.

This furnishes not only the best honey of any plant in the world, letting the majority judge, but the quality of the plant for feed for cattle, whether hay or pasture, is probably better for milk-producing than any other forage-plant. It can be sown almost any time, but perhaps gives best results for seed, when sown in April or May. About 4 lbs. are required per acre, and it does not blossom much until the second year. Its treatment and cultivation are much the same as for common red clover, but the seed is saved from the first crop. We know our seed to be fresh, and free from dangerous seeds.

White Dutch Clover. Prices, same as alsike.

This differs but little from the ordinary white clover. It has an advantage over alsike, inasmuch as it will scatter itself without any cultivation, and it grows along the roadsides, pastures, and all waste places.

Peavine, or Mammoth Red Clover. Bush, \$5; $\frac{1}{2}$ bu., \$2.60; pk., \$1.40; per lb., 12 c.; by mail, 9c per lb. extra.

This yields honey late in the season after all other clovers, and, in fact, after basswood; and in some localities it rarely fails to give more or less of a crop, especially where Italian bees are kept. In other localities there have been complaints made that the bees would not work on it.

Buckwheat, Japanese. Trial packet, 4 ounces; by mail, postpaid, 5 c.; 1 lb. by mail, postpaid, 15 c.; peck, 35 c.; $\frac{1}{2}$ bush., 60 c.; bush., \$1.00. These prices include bag to ship it in. Ten or more bushels, purchaser paying for bags, 75 c.

We should place buckwheat at the head of the list were it not for the fact that it often fails, almost, if not quite, to yield honey; and the quality of the honey is always second class and the color is dark. At the present time the Japanese has so far outstripped all other varieties that we have dropped them entirely from our list. It makes a much stronger growth than the old kinds, gives a much larger yield of grain, and also matures its seed a little earlier. During the past season the yield has been so great as to put

buckwheat flour as well as grain at a lower price than it has been known before for years. We have an 8 page pamphlet, being a collection of articles from different localities, telling just how to raise buckwheat. Mailed for 5 c., or given free to all purchasers of our seed. Please notice that buckwheat can not very well be sent ALONE BY ITSELF, either by mail, freight, or express, without the expense of shipment being more than the value. If you want a peck, or half a bushel, it should be ordered by freight with other goods, unless you are willing to pay more than the seed is worth, in the way of charges.

Alfalfa, or Lucerne. Per bush., \$9.00; $\frac{1}{2}$ bush., \$5.00; peck, \$2.75; pound, 20 cts. By mail, 9 cts. per lb. added.

This is the great honey-plant of Arizona, Idaho, California, and other Western States and Territories. Where it is raised by irrigation in fields of a thousand acres or more there is an almost continuous honey-flow from spring until winter. In fact, quite recently we have had reports of beautiful honey not only by the ton, but by the carload. Little patches have, at least partially, succeeded in the Eastern States. During the coming season there will probably be many experiments made to test it. During dry seasons it will succeed, without a doubt; but in our arid and semi-arid lands it is detrimental. On our grounds it stands winter without injury, and we have found the roots at a depth of several feet. We furnish purchasers a little book in regard to its cultivation.

Rape. Oz. 5 cts.; lb. 15 cts.; 10 lbs. or over, 10 cts. per lb. By mail, 9 cts. per lb. extra.

Where rape is used for making oil, it often yields a considerable quantity of honey. In most localities, however, it is liable to be destroyed by the black fly, if sown earlier than July. It is sown like turnips, and about 3 lbs. of seed is enough per acre. It may blossom in four weeks after being sown, and stay in blossom four weeks longer.

Raspberry. Price of plants: 10, 40 cts.; 100, \$2.50; If wanted by mail, add 5c for 10, or 25 cts. per 100.

Red raspberries are, without doubt, one of our best honey-plants, and the Turner and the Cuthbert are probably as good as any varieties, the former being early and the latter late.

The above are the only plants I know of that can be *profitably* grown by the bee-keeper; that is, the honey they yield would probably pay, in connection with the profit on the plant for other purposes.

The following plants yield honey, and many of them in considerable quantities; but they are so little used for other purposes that there is little inducement to raise them by the acre; and let us bear in mind that it must take *acres* of any plant to yield honey enough to amount to any thing.

Bee Balm, or Melissa. Oz. 15c; lb. \$2.00.

For further description, see GLEANINGS for November, 1887.

Borage. Oz. 10c; lb. 75c; if wanted by mail, add 10c per lb. extra.

A strong, hardy, rapidly growing plant, bearing a profusion of blue flowers. It may be sown any time, but will, perhaps, succeed best, at about crop-planting time. As it grows tall, and branches out considerably, it should have plenty of

room. I know that bees are very busy on it, all the day long, from July until Nov., but I do not know how much honey an acre of it would furnish. It is easily tried, because it grows so readily, and if sown on the ground after early potatoes are dug, you will get a nice crop of fall bloom. Sow broadcast, or in hills like corn. Borage is also used as a salad, or cooked as spinach.

Catnip. Oz. 10c; lb. \$1. If wanted by mail, add 10c per lb. extra.

This has been very much talked about, and we have record of some experiments with an acre or more; but, if I am correct, no one has ever yet seen a barrel of catnip honey. If you wish to try, we can furnish you good seed, that we have tested ourselves. Sow in the fall.

Chapman Honey-plant. Oz. 25c; lb. \$3.

This is called, in European countries, "globe thistle." It was introduced by Mr. H. C. Chapman, of Versailles, N. Y., who cultivates it extensively for honey, and claims that it is a paying investment.

Dandelions. Package 5c; oz. 50c.

I presume everybody can get dandelion seeds and roots without buying them, but for all that, I have much faith in an acre of cultivated dandelions. French thick-leaved is superior for "greens," and by the way our bees take to our "patch" of it, I think it must be superior for honey.

Figwort, or Simpson Honey-plant. Oz. 20c; lb. \$2. By mail, 10c per lb. extra, for postage.

This is a queer tall weed that grows in fields and woods, and bears little cups full of honey. It bears honey all the day long from July to October! Very hardy; blooms first year, and after that shoots up from the root every year, but needs planting anew about every three years. The seed sometimes lies in the ground many months before germinating. If sprinkled on the top of damp leaf-mold, packed hard in a box, and rolled hard, being kept dark and damp in a warm place, they will sprout in a week or two. Then give all the light and air possible, but not too much water.

Honey Pea. Per bu. \$1.75; half-bu. \$1; peck 60c, packages included. Per lb. 10c; by mail 10c extra. Bu. weighs about 60 lbs.

This is the stock pea of the South, and often yields much honey. It is also used for food.

Horsemint. Oz. 20c; lb. \$2. Postage 10c per lb. extra.

The celebrated honey-plant of Texas.

Cerulea, Bee Clover. Oz. 10c; lb. 75c; by mail, add 10c. for bag and postage.

This latter blossoms in about six weeks after sowing, and bears a small blue flower.

Lippia Nodiflora. Oz. \$1.

For description see Dec. 1879, GLEANINGS. Give hot-bed treatment.

Mignonnette. Oz. 10c; lb. \$1; by mail, add 10c per lb.

This is a great favorite with the bees, and also with those who are raising plants for their bees; but although we have sold considerable of the seed for bee pasturage, I am not sure that any one has ever made it pay in dollars and cents, for the honey alone. The tall varieties seem best suited to the bees, but are not as fragrant. It should be sown in the spring; and as the seed is small, it should have fine clean soil, and be covered lightly. This plant seems to have a rare capacity for standing frost, and bees may often be seen busy upon it clear into October.

Motherwort. Prices same as for catnip.

Mustard. Common (either white or black), lb. 25c; oz. 10c. Add 10c per lb., if to be sent by mail.

The honey from this is said to be very light, equal to any in flavor, and to command the highest price in the market.

Portulaca. 5c per package.

Best mixed. A bed of portulaca, say a rod square, will show more bees in the working season, for the area, than any other plant I know of; furthermore, a bed of mixed portulacas, equivalent to a square rod, makes one of the handsomest, if not the handsomest of sights, when in full bloom, the whole floral kingdom affords. It does not seem to me that any bee-keeper ought to be without a bed; and I might also say, no lover of flowers can well afford to forego the gorgeous spectacle of a bed of mixed portulacas, especially

when the seed is only 5 cents a paper. One paper will cover a square rod of ground nicely. You can have the square rod laid out in artistic beds and walks, if you choose.

Rocky Mountain Bee-plant *Cleome integrifolia*. Per lb. \$1.25, postage 10c extra; oz. 15c.

This is closely connected with the noted Spider plant (*C. pumila*), these two being the only species of the *Cleome*. With us, it is much inferior to the Spider plant as a honey-producer. We have reports from some localities of its yielding large quantities of honey, hence quite a demand for the seed is the result.

Sage, White (*Salvia argentea*). Oz. 35c; lb. \$4.

It is called the honey-plant of California, and belongs to the Labiate or Mint family, the same as Rosemary, Balm, Hoarhound, etc.

Sweet Clover (*Melilotus alba*, or *Melilot*). Per lb. 18c; 10 lbs. \$1.50; 100 lbs. \$12; if wanted by mail, add 10c for bag and postage. This is sold with the hulls on; the Bokhara is hulled.

This has some valuable traits, as standing frost and drouth, but many times and seasons, the bees will hardly notice it at all. About four pounds of seed are needed for an acre. Sow in spring or fall. In the vicinity of Salt Lake, Utah, sweet clover is the main honey-plant, and the quality of the honey is equal, in my opinion, to any honey in the world. The plant lives through the dry summers in Utah.

Bokhara Clover is the same as the above.

Sunflower, Mammoth Russian. Oz. 5c; lb. 10c; 10 lbs. or over, 8c; 100 lbs. 7½c; if wanted by mail, add 10c for bag and postage.

This plant is visited by the bees in great numbers in some localities, while in others it is scarcely noticed; but, as the seeds usually pay all expenses of cultivation, it holds its place as a honey-plant. The mammoth Russian bears by far the largest blossoms, as well as the largest seeds.

Spider Plant. Package 5c; oz. 20c; lb. \$2. Postage 10c per lb. extra.

This plant, under favorable circumstances, yields more honey than any thing that ever before came under my observation. In Oct. 1879, each floweret yielded drops so large that a bee had to make two or more journeys to get it all, and I succeeded in dipping the honey from the plant with a spoon, until I had filled a bottle with it, for experiment. As it yields only this honey early in the morning, and late in the evening, it will go nicely with the Simpson honey-plant. I should think it quite probable that 3 acres of each of these plants would keep 100 colonies busy enough to be out of mischief during a dry fall, when bees are so apt to be robbing. For particulars concerning both plants, see A B C of Bee Culture. The Spider plant is an annual and should be sown every year. It grows most quickly with hotbed treatment, but will blossom in August if sown in the open ground in May.

Seven-top Turnip. Oz. 10c; lb. 50c. If wanted by mail, 10c per lb. extra.

This plant, although not equal to the Spider plant and the Simpson honey-plant, is entitled to a place next to them, because it bears its crop of honey in the spring, between fruit blossoms and clover. It should be sown in Aug. and Sept. It bears no root like the ordinary turnip, but only foliage that is used for greens.

Italian or Scarlet 'T. *incarnatum*.

Introduced from Italy and France. The flowers are most beautiful, much resembling a large luscious strawberry. Blossoms first year.

Yellow Trefoil (*Medicago lupulina*).

A weed or pasture plant, in dry or sandy fields.

Erysimum (False Wall Flower).

Belongs to the Cruciferae or Mustard family, and comprises but three species.

Spring Vetches or Tares (*Vicia sativa*).

Seems to be a cross between the Pea and Clover, partaking of the peculiarities of each, and belongs to the same family, Leguminosae. Does not yield honey with us.

Any of the above seeds will be sent in 5c packages, to those who would like just a few to try.

MISCELLANEOUS IMPLEMENTS FOR GARDENERS, FARMERS, Etc.

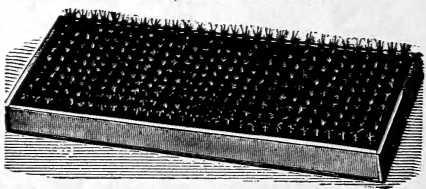
TRANSPLANTING-BOXES FOR SEEDLINGS.



EMPTY SEED-BOX FOR EARLY PLANTS.

To give drainage and strength, we have the bottom made of slats only three or four inches wide, and only ½ inch thick. They are nailed on crosswise, as you will notice. Such light stuff would not be strong enough if put on lengthwise of the box. The sides of the box are 1½ x ½ inch. These are very easy to carry about, and answer just as well for small plants. From one of these boxes, we, in the

spring of 1886, got 7500 celery-plants. After the first leaf had formed they were taken up and planted into similar boxes, as shown below:

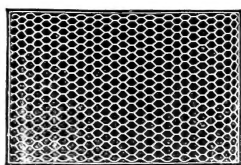


A BOX OF WHITE-PLUME CELERY-PLANTS AS IT APPEARS WHEN FIRST TRANSPLANTED.

Price of seed-boxes, as shown, made complete, 15c each. Price of stuff in the flat, in lots of 10, 85c; 100 in the flat, \$8.00.

You will observe that there are 10 rows of plants, and 30 plants in a row, so it took 25 boxes, with 300 plants to a box, to contain just what grew in one single seed-box.

TRANSPLANTING-FRAME.



The above is made by stretching a piece of poultry-netting over an iron frame. This is then laid over one of the plant-boxes shown above, and the plants are put in the center of each mesh. Celery-plant seedlings we put two in each mesh—a plant in each sharp corner. This spaces them properly, without any effort, and lays out the work so that even a child may learn to transplant seedlings, and do it well and rapidly. Price of transplanting-frame, suitable for the above boxes, 25 cts.

We start cabbage, cauliflower, and celery plants, in the fore part of February; tomato-plants from the middle to the latter part. If they get too large before the weather is suitable to set them out, shear off the tops and let them grow out again. This will have the effect of making a strong root.

PAPER SEED-BAGS.

Large size, to hold ounces, \$1.50 per 1000, or 20 cts. per 100. Medium size, to hold ordinary packets, \$1.35 per 1000, or 18 cts. per 100. Small size, for very expensive seeds, \$1.15 per 1000, or 15 cts. per 100. If wanted by-mail, add for postage, 5, 8, and 16 cts. per 100 respectively. The same printed to order (not to exceed 50 words), 25 cts. per 100, or \$1.00 per 1000.

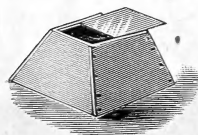
LABELING STAKES FOR THE GARDEN.

Now, the above-mentioned seed-bags, which are the same as we use for all our seeds, are stout water-proof manilla paper, and we find them the very best thing for labeling the seeds you have planted, that we have ever got hold of. Tack them on to a pine stake, like the one figured below; and after standing out all winter in the snow and rain, the print can be read just as easily as when first put on.



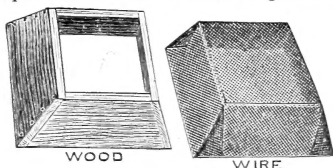
These stakes, as you observe, are made tapering, and thick enough at the large end so that, if you blunder over them, they may be kicked out of the ground, but can not be broken off. Price of stakes, one cent each; 10 for 8 cts.; per 100, 75 cts. These are too heavy to be sent by mail, unless you want just a sample. In that case, the postage will be 3 cts. extra.

BOXES FOR STARTING SQUASHES, MELONS, CUCUMBERS, ETC.



During my visit to Arlington, in July, 1886, I noticed that the squash-growers had a plan for getting Boston Marrow squashes on the market very early. It is by means of the boxes shown in the adjoining cut. These, as you notice, are made so as to nest one in the other, occupying but little room when stored away, or drawn out on the wagon. An 8x10 glass slides in the top. These boxes can be used for putting over hills of early potatoes in March and April; and when the potatoes are out of danger the boxes will do good service in forwarding squashes, melons, and cucumbers. After all danger of frost is past, the glass may be drawn out, but the box is left on, as a protection against bugs. If the bugs are very bad, however, you will have to tack on cheese cloth. The striped bug will crawl through mosquito bar. As the glass is to move loosely, it is

not a very long job to slide them all back when the weather is mild, and close them up again at night, when frost comes. If the earth is banked around the lower edges, it makes quite a miniature cold frame. I was astonished while at Arlington to see squash-vines fully a month ahead of the usual time; but I was told these boxes were the explanation of it. Don't fail to have a big lot of good manure under every box (see our little book, "Gregory on Squashes"). Prices of these little boxes without glass, in the flat, 10 cts. each; 85 cts. for 10; \$7.50 per 100. Glass to match, \$2.50 per box of 50 square feet. There are about 90 lights in a box.



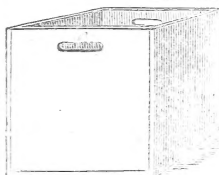
THE BUG-PROTECTOR, AND HOW TO MAKE IT.

After the season of frost is passed, we prefer, for a bug-protector, the wire-cloth basket shown above. They are made of pieces of wire-cloth 18 inches square, and the wooden form on the left of the cut shows how they are made. We can furnish these made up, for 5 cts. each; 48 cts. for 10; \$4.50 per 100. Smaller sizes, for single plants, 4 cts. each; 38 cts. for 10; or \$3.50 per 100. Small ones can be sent by mail in lots of 10, at 25 cts. for postage on the 10.

POTATO-BOXES.

GALVANIZED BOUND.

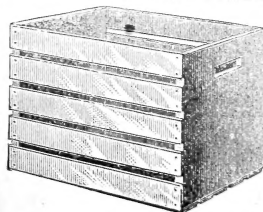
(TERRY'S).



These are made of basswood, bound with galvanized iron. The galvanized iron gives strength, and the basswood strength and lightness. These hold exactly a bushel when level full, and may be piled one on top of another. Although they are made especially for potatoes, they can be used for fruit, vegetables, picking up stones on the farm, and a thousand other purposes. When piled one above the other, they protect the contents from the sun and rain; and from their shape a great many more bushels can be set into a wagon than where baskets are used. They are also much more substantial than baskets.

Price, mailed up, 25 c each; 10, \$2.25; 100, \$20.00. In the flat, including nails and galvanized iron, \$1.75 for 10; 160, \$16.50; 1000, \$150.

SLATTED POTATO-BOX



As the pieces of which the above are made are mostly from remnants of basswood used in making sections, we can furnish them nailed up for 20 cents each; 10 for \$1.85; 100, \$16.00. Material in the flat, including nails, in packages of 12 boxes each, at

\$1.50 per package, and each package includes two of the 12 boxes nailed up, complete. Ten pkgs. 5% off. Please be careful in ordering to say whether you want the galvanized bound or the slatted boxes.

OUR

\$4 Daisy Wheelbarrow

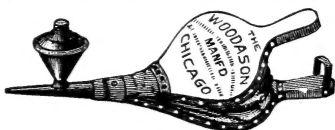
Strongest and neatest barrow made for gardeners, bee-keepers, merchants' delivery, and general use. Has steel wheel, axle, and legs; steel springs with adjustable bearings. Elegantly painted and varnished. Will carry 500 lbs. Two sizes, weighing 35 and 40 lbs. each. Price \$4 and \$4.25.



PYRETHRUM ROSEUM.

(Persian Insect-Powder.)

This is not only a pretty plant for the flower-garden, but the flowers, gathered and dried when in full bloom, and then finely powdered, furnish us the Persian insect-powder, of which so much has been said. This powder sells at from 50 cts. to \$1.00 a pound, and even then is often largely adulterated. With us it has been the surest thing to kill all sorts of small insects, laying them out dead in even a few minutes, of any thing we have ever got hold of. When used in the insect-powder bellows, shown below, but a very little of the powder is required.



INSECT-POWDER BELLOW; PRICE \$1.00; SIZE 6X18 INCHES.

With the above instrument you can kill every fly in any room of the house, within an hour. Of course, the doors and windows of the room should all be closed; but where it is not practicable to do this, you can tumble the flies on their backs, even then; but you will have to use more of the powder. In painting new houses in the summer time, when flies are troublesome, the instrument is worth more than it costs, for this alone. It will kill even the green fly in our lettuce-greenhouses; for with the above bellows you can fill the room with such a dust that every insect of every description has got to die; and the strangest and best part of it all is, that it is not at all poisonous or injurious to human beings. It may make you sneeze right smart, but that is not half as unpleasant as it is to endure the flies.

Price of the powder, all ready for use, half ounce, 5 cts.; $\frac{1}{4}$ lb., 25 cts.; 1 lb., 75 cts.; 10 lbs., \$7.00. Price of the seeds, one packet, 5 cts.; one ounce, 75 cts.; 1 lb., \$7.00. By mail, 18c per lb. extra on powder, and 9c on the seeds.

GOODS ESPECIALLY FOR POULTRY RAISERS.**PURE BONE MEAL.**

Coarsely ground, expressly for poultry. Per lb., 5 cts.; 5 lbs., 3 cts. per lb.; 10 lbs., 2 $\frac{1}{2}$ cts. per lb.; 100 lbs., 2 $\frac{1}{2}$ cts. per lb.; by the barrel, shipped from factory, 2 cts. per lb. Fowls will eat this almost as greedily as corn; and it not only furnishes material for egg-shell, but it gives them considerable animal matter besides. Excellent for laying hens. It is sure cure for thin-shell eggs.

Bone meal ground fine, for gardening purposes, same price as the above.

Ground oyster-shells for poultry, half above price.

NEST-EGGS. 3 kinds, white glass, china, and polished wood, each 3 cts.; 10, 28 cts.; 100, \$2.50.

The china is too heavy to send by mail. Postage on the others is 8 cents each.

Sundowner Seed, Mammoth Russian, per lb., 10c.; 10 lbs., 80c.; 100 lbs., \$7.50.

Smaller variety—just as good for poultry, one-half the above prices.

BOOKS ON GARDENING, HORTICULTURE, FARMING, ETC.

I have indicated my opinion of the books by characters as follows: Books that I approve I have marked with a *; those I especially approve, **.

3 | A B C of Potato Culture, Terry* 35
This is T. B. Terry's first and most masterly work. The book has had an enormous sale, and has been reprinted in foreign languages. When we are thoroughly conversant with friend Terry's system of raising potatoes, we shall be ready to handle almost any farm crop successfully. It has 48 pages and 22 illustrations.

3 | An Egg Farm, Stoddard** 45
No matter whether you raise eggs on a large scale or a small scale, you can not afford to miss reading friend Stoddard's book. I do not know that I ever got hold of any piece of fiction—not even Robinson Crusoe, that so thoroughly fascinated me as these chapters in regard to raising poultry on a large scale. The work has 48 pages and 48 illustrations.

7 | Farm, Gardening, and Seed Growing** 90
This is by Francis Brill, the veteran seed-grower, and is the only book on gardening that I am aware of that tells how market-gardeners and seed-growers raise and harvest their own seeds. It has 166 pages.

 Celery and its Cultivation. By W. W. Raw-

son.

I have taken pains to read carefully all of the little pamphlets published on celery-growing; and although this does not exactly meet my views, it comes the nearest to it. If read in connection with our "What to Do," you will have, I think, all the information needed.

5 | The Silo and Ensilage, by Prof. Cook, new edition, fully illustrated 20

Three thousand copies of the first edition of this little book were sold in about eight months, and friend Cook has now gotten out a new and enlarged edition, fully illustrated with excellent engravings. The pictures are worth alone to me a good deal more than 25 cts. The whole matter is treated in friend Cook's happy way of making things plain. We can send the book postpaid by the first mail.

3 | Maple Sugar and the Sugar-bush, by Prof. A. J. Cook. 35

The name of the author is enough of itself to recommend any book to almost any people; but this one on maple sugar is written in Prof. Cook's happiest style. It is profusely illustrated, and all the different points in regard to making the very best quality of maple syrup and maple sugar are fully explained. All recent inventions in apparatus, and methods of making this delicious product of the farm, are fully described.

10 | Fuller's Grape Culturist* 1 40
This is the most systematic and complete treatise on thorough work on grape culture now in print in fact, friend Fuller here tells us how, by easy steps, to make any grapevine come into the work, and make a pleasant, orderly appearance, as he makes it as attractive as a piece of fiction; and the best part of it is, that you get great crops of beautiful grapes during almost any kind of season. We have tested the system, and know whereof we speak.

10 | Farming for Boys* 1 15
This is one of Joseph Harris' best of his productions, and it seems to me that it ought to make farm-life fascinating to any boy who has any sort of taste for gardening.

10 | Gardening For Pleasure, Henderson* 1 40
"Gardening For Profit" is written with a view of making gardening pay. It touches a good deal on the pleasure part, and "Gardening for Pleasure" takes up this matter of beautifying your homes and improving your grounds, without the special point in view of making money out of it. I fancy that if you will need this if you get "Gardening for Profit." This work has 246 pages and 134 illustrations.

12 | Gardening for Profit, ** New Edition 1 85
This is a late revision of Peter Henderson's celebrated work, but nothing that has ever before been in print has done so much toward making market-gardening a science and a fascinating industry. Peter Henderson stands at the head, without question, although we have many other books on these rural employments. If you can get a copy of his book, let it be the above. It has 376 pages and 138 cuts.

8 | Gardening for Young and Old, Harris* 90
This is Joseph Harris' best and happiest effort. Although it goes over the same ground occupied by Peter Henderson, it particularly emphasizes thorough cultivation of the soil in preparing your ground; and this matter of adapting it to young people as well as to old is brought out in a most happy vein. If your children have any sort of fancy for gardening it will pay you to make them a present of the book. It has 187 pages and 45 engravings.

5 | Gregory on Cabbages; paper* 25

5 | Gregory on Squashes; paper* 25

5 | Gregory on Onions; paper* 25

10 | Gardening and Farm Topics, Henderson* 75

The above three books, by our friend Gregory, are as valuable. The book on squashes especially is good reading for almost anybody, whether they raise squashes or not. It strikes at the very foundation of success in almost any kind of business.

10 | Success in Market Gardening* 90

This is a new book by a real, live, enterprising, successful market-gardener who lives in Arlington, a suburb of Boston, Mass. Friend Rawson has been one of the foremost to make irrigation a practical success, and he now irrigates his grounds by means of a windmill and steam-engine whenever a drought threatens to injure the crops. The book has 208 pages and is nicely illustrated with 116 engravings.

10 | Irrigation for the Farm, Garden, and Orchard, Stewart* 1 40

This book, so far as I am informed, is almost the only work on this matter that is attracting so much interest, especially recently. Using water from springs, freely is good reading to take the place of rain, during our great droughts, is the great problem before us at the present date. The book has 274 pages and 148 cuts.

3 | Strawberry culturist, Fuller* 15

3 | Money in the Garden, Quinn* 1 40

10 | The New Agriculture, or the Waters Led Captive 75

This book created quite a sensation three or four years ago; and while father Cole's bright visions have not all been realized, I think the book contains much that is good. It is a large and beautiful book, originally sold for \$1.50. I purchased 100 volumes when it was first issued, but as it has not sold very well, I now offer them at 75c each.

8 | What to Do, and How to be Happy While Doing It, by A. I. Root 75

The above book is intended to solve the problem of finding occupation for those scattered all over our land, out of employment. The suggestions are principally about finding employment on your own home. They include suggestions upon market-gardening, fruit culture, poultry-raising, etc. I think it will be well worth the price, not only to those out of employment, but to any one who loves home and rural industries. Price in paper covers, 50 cts. each.

A. I. ROOT, Medina, O.